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EXAMINER				
COLLINS, ALVIN				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/539,345

**Applicant(s)**

BURCKHARDT ET AL.

**Examiner**

Alvin C. Collins

**Art Unit**

4151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-28 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/55/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Claim Objections***

2. Claim 16 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, claim 16 has not been further treated on the merits, however, dependent claims 17-19 have been interpreted as dependent on claim 1 to advance prosecution of the application.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3, 4, 5, 8, 12, 13, 15, 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 1-14 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention. In claims 1 and 13, applicant uses the phrase "one-component composition." However, claims 10, 11, and 20 recite this composition containing additional components. Clarification is requested.

6. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

7. In the present instance, claim 1 recites the broad recitation "optionally having one or more hetero atoms, and the claim also recites "in particular nitrogen atoms" which is the narrower statement of the range/limitation.

8. In the present instance, claim 3 recites the broad recitation "R1 is a methylene, propylene, methylpropylene, butylene or dimethylbutylene group," and the claim also

recites "in particular a propylene group" which is the narrower statement of the range/limitation.

9. In the present instance, claim 4 recites the broad recitation "R2 is a methyl group or an ethyl group or an isopropyl group," and the claim also recites "in particular a methyl group or ethyl group" which is the narrower statement of the range/limitation.

10. In the present instance, claim 5 recites the broad recitation "R3 is a methyl or ethyl group," and the claim also recites "in particular a methyl group" which is the narrower statement of the range/limitation. In the present instance, claim 8 recites the broad recitation "the polymeric alcohol is a polyoxyalkylenepolyol," and the claim also recites in particular a polyoxypropylenediol or polyoxypropylenetriol" which is the narrower statement of the range/limitation.

11. In the present instance, claim 12 recites the broad recitation "a hydrosilylation reaction from a polymer having terminal double bonds," and the claim also recites "in particular from allyl-terminated polyoxyalkylene polymers, with alkoxysilanes" which is the narrower statement of the range/limitation.

12. In the present instance, claim 13 recites the broad recitation "the polymer containing silane groups is prepared from a polyurethane polymer containing isocyanate groups and organosilanes reactive toward isocyanates," and the claim also recites "in particular mercaptoalkylsilanes or aminoalkylsilanes" which is the narrower statement of the range/limitation.

13. In the present instance, claim 15 recites the broad recitation "f is in the range between 1 and 3," and the claim also recites "in particular between 1.2 and 2.5" which is

the narrower statement of the range/limitation. In the present instance, claim 17 recites the broad recitation "R7 is a linear or branched alkyl group having 1 to 6 carbon atoms," and the claim also recites "in particular a tert-butyl group" which is the narrower statement of the range/limitation.

14. Regarding claim 13, the phrase "preferably" and "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

15. Claim 21 provides for the use of the composition of claim 1 as an adhesive, sealing compound, coating or lining, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

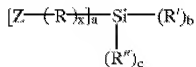
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 1-15, 17-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Schoonderwoerd et al., US Patent 6,057,001 (hereinafter "Schoonderwoerd").

18. While the reference teaches the polymer as claimed, with respect to the moisture curing one component composition, note the intended use set forth in the preamble does not manifestly, further limit the compound. The resulting polymer is capable of use as a moisture curing composition. Note a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, it meets the claim.

19. Regarding claims 1 and 15, Schoonderwoerd teaches a one component composition comprising a polyacetoacetate, which can be derived from a polymeric polyol (see col. 3, lines 15-21), and cross linker and a silane of the formula below



wherein Z is an amino-containing group (corresponding to the amino group of formula (I) containing R<sup>4</sup>, <sup>5</sup>, and <sup>6</sup>), R (corresponding to R<sup>1</sup> of formula (I)) is an aliphatic, alicyclic

or aromatic group and x is 0 to about 20, R' [corresponding to R<sup>2</sup> of formula (I)] is an alkoxy group or alkoxyalkoxy groups, R" [corresponding to R<sup>3</sup> of formula (I)] is an alkyl group having 1 to about 8 carbon atoms, a is 0 to 3, preferably 0 to 2, b is 1 to 4, preferably 1 to 3, c is 0 to 3, and preferably 0 to 2, and the sum of a+b+c is 4. While Schoonderwoerd does not teach the average functionality "f" based on the 3-(N-silylalkyl)aminopropenoate groups, the presence of the group (i.e. f=1) satisfies the claim where f is in the range between 1 and 3. The silane can be provided in the form of a reaction product with another component (e.g. the polyacetoacetate) as described in col. 10, lines 1-4. Reaction of the silane with polyacetoacetate results in the structure of applicant's claim 1 (see applicant's process claim 16).

20. Regarding claim 2, Schoonderwoerd teaches a composition which contains about 1 to 10 weight percent of organosilanes, preferably about 1.5 to about 5 weight % (see col. 9, lines 56-58). This reads on the moisture-curing one-component composition in that f is in then range between 1.2 and 2.5.

21. Regarding claim 3, Schoonderwoerd teaches the moisture-curing one-component composition in claim 1 where R (corresponding to R<sup>1</sup> of formula (I)) is an alkylene group (see col. 9, line 1). Also, in all of the examples of organosilanes useful in the invention, the R is a propyl group (see col. 9, lines 13-20), thus reading on The moisture curing one component composition as claimed in claim 1, characterized in that R<sup>1</sup> is a methylene, propylene, methylpropylene, butylene or dimethylbutylene group, in particular a propylene group.



22. Regarding claim 4, Schoonderwoerd teaches R' [corresponding to R<sup>2</sup> of formula (I)] as a lower alkyl group such as methyl, ethyl, propyl, or isopropyl (see col. 9, lines 2-4). This reads on the moisture curing one component composition as claimed in claim 1, characterized in that R<sup>2</sup> is a methyl group or an ethyl group or an isopropyl group, in particular a methyl group or an ethyl group.

23. Regarding claim 5, Schoonderwoerd teaches R" [corresponding to R<sup>3</sup> of formula (I)] is an alkyl group having 1 to about 8 carbon atoms. More specifically, 3-Aminopropyl-methyl-diethoxysilane and N-aminoethyl-3-aminopropyl-methyl-diethoxysilane are suggested (see col. 9, lines 13-20). This reads on the moisture curing one component composition as claimed in claim 1, characterized in that R<sup>3</sup> is a methyl or an ethyl group, in particular a methyl group.

24. Regarding claim 6, all of the aminosilane examples in col. 9, lines 13-20, which are subsequently reacted with monomeric polyacetoacetate, are primary amines. It would be expected product of the condensation reaction would yield the aminosilane of formula 1 where R<sup>4</sup> is a hydrogen atom. This reads on the moisture curing one component composition as claimed in claim 1, characterized in that R<sup>4</sup> is a hydrogen atom.

25. Regarding claim 7, Schoonderwoerd teaches the moisture-curing one-component composition as claimed in claim 1, which is prepared using a polymeric alcohol of methylacetoacetate (see col. 6, lines 12-18). This in the composition in that R<sup>5</sup> is a hydrogen atom and R<sup>6</sup> is a methyl group.

26. Regarding claim 8, Schoonderwoerd teaches polyether polyols having at least 2 hydroxyl groups as polyacetoacetate precursors, where poly(oxyalkylene)diols, triols and tetrols are preferred (col. 5, lines 4-7). This reads on the moisture curing one component composition as claimed in claim 1, characterized in that the polymeric alcohol is a polyoxyalkylenepolyol, in particular a polyoxyalkylenediol or a polyoxyalkylenetriol, in particular a polyoxypropylenediol or polyoxypropylenetriol.

27. Regarding claim 9 Schoonderwoerd teaches the use of polypropylene glycol, which does not have unsaturation (see col 5, lines 16-21). This reads on the moisture curing one component composition as claimed in claim 1, characterized in that the polymeric alcohol is a polyoxyalkylenediol or a polyoxyalkylenetriol having a degree of unsaturation of less than 0.02 meq/g and a molecular weight from 1000 to 30 000 g/mol.

28. Regarding claims 10-11, Schoonderwoerd teaches in all of the examples of organosilanes useful in the invention, the R is a propyl group (see col. 9, lines 13-20). The organosilane is used in the primer formulation, the resulting polymer will contain silane groups.

29. Regarding claim 12, Schoonderwoerd teaches the moisture-curing one-component composition as claimed in 11, prepared from polyurethanes with at least 2 hydroxyl groups with a stoichiometric excess of a monomeric or polymeric polyalcohol. (col. 4, lines 36-45).

30. Regarding claim 13, Schoonderwoerd teaches the coating composition containing an organosilane of formula as claimed in claim 1 where Z is a mercapto-containing group. This reads on claim 13.

31. Regarding claim 14, Schoonderwoerd teaches the coating composition containing an organosilane of formula as claimed in claim 1 where Z is a vinyl-containing group, an epoxy-containing group, an ureido-containing group, or an imidazole-containing group. These groups are present for non-polyurethane preparation of the coating composition and do not require an isocyanate-compound for its preparation, which reads on claim 14.

32. Regarding claim 17, Schoonderwoerd teaches the preparation of the polymer of formula (II) from polyalcohols which are acetoacetylated by transesterification with alkyl acetoacetates, particularly t-butyl acetoacetate (see col. 6, lines 13-16). This reads on claim 17.

33. Regarding claim 18, Schoonderwoerd teaches the process as claimed where the polymer of formula (II) is reacted with polyfunctional amine crosslinker in an amount insufficient to crosslink all of the aminoacetate groups in formula II (see col. 6, lines 30-36). The preferred diamines are detailed in col. 7, lines 7-19). This reads on claim 18.

34. Regarding claim 19, while Schoonderwoerd teaches the composition of claim 1, Schoonderwoerd teaches this composition as generally containing solvent, which is suggestive of no solvent, thus anticipating the claim (see col. 11, line 1).

35. Regarding claim 20, Schoonderwoerd teaches the coating composition containing other additives (see col. 1, lines 13-28). This reads on claim 20.

36. Regarding claim 21 and 23-26, Schoonderwoerd teaches the coating composition as being applied to an article by roller coating, spraying, brushing, flow coating, or dipping (see col. 11, lines 28-32). This reads on claims 23-26.

37. Regarding claim 22, the term "arrangement" has not been defined in the specification, and thus does not further distinguish the claim patentably from claim 1.

Schoonderwoerd teaches the composition of claim 1 as discussed above, thus anticipates claim 22 similarly.

38. Regarding claim 27, Schoonderwoerd teaches the method of claim 24 where the curing process occurs at ambient temperature or above, which reads on claim 27 (see col. 11, lines 40-44).

39. Regarding claim 28, Schoonderwoerd teaches a method of preparing the surface to be coated by cleaning with a water based alkaline cleaner (see col. 11, lines 35-39).

This reads on claim 28.

### ***Claim Rejections - 35 USC § 103***

40. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

41. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

42. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

43. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schoonderwoerd as applied to claim 1 above, and further in view of Ganung et. al. US Patent 3,289,881 (hereinafter "Ganung").

44. Regarding claim 22, Schoonderwoerd teaches the composition of claim 1. Schoonderwoerd does not teach an arrangement comprising the composition of claim 1. Ganung teaches a container for storing paint, which reads on the arrangement in claim 22 (see col. 1, lines 8-10). It would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the container for storing paint as taught by Ganung with the composition as taught by Schoonderwoerd for the benefit of preserving the composition in the absence of moisture.

#### ***Conclusion***

45. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,214,086.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin C. Collins whose telephone number is (571) 270-7734. The examiner can normally be reached on Monday through Thursday, 7:30 am - 5:00 pm EST and on alternate Fridays from 7:30 am - 4:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571) 272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alvin C. Collins/

***/Angela Ortiz/  
Supervisory Patent Examiner, Art Unit 4151***